

In the Claims

1. (currently amended) A fertilizer granule comprising:
  - i) an elemental sulfur and swelling clay matrix; and
  - ii) at least one additional fertilizer material incorporated dispersed into said matrix.
2. (original) The fertilizer granule of claim 1, wherein said additional fertilizer material is selected from the group consisting of ammonium sulfate, urea, potash, ammonium, phosphate and micronutrient fertilizers.
3. (currently amended) The fertilizer granule of claim 1, ~~wherein said at least one additional fertilizer material is a core fertilizer which comprises a further comprising a fertilizer~~ core surrounded by said matrix.
4. (currently amended) The fertilizer granule of claim 3, wherein said fertilizer core ~~fertilizer~~ comprises an ammonium sulfate crystal.
5. (cancelled)
6. (currently amended) The fertilizer granule of claim 1 4 wherein said additional fertilizer material comprises ammonium sulfate fines.
7. (cancelled)
8. (original) The fertilizer granule of claim 2, wherein said micronutrient fertilizers comprise a material selected from the group consisting of iron, copper, zinc, boron, manganese and their oxy-sulfate, sulfate and oxide forms.
9. (original) The fertilizer granule of claim 1 wherein said matrix comprises a sulfur to clay ratio of about 10 to 1 to about 20 to 1 by weight.

10. (currently amended) A process for the preparation of a controlled release fertilizer particle comprising the steps of:

- a) preparing a liquefied mixture of sulfur and a swelling clay;
- b) blending an additional fertilizer material into said liquefied mixture;
- c) b) transferring said liquefied mixture to a granulator;
- d) e) adding an additional fertilizer material for coating with said liquefied mixture thereby forming coated granules; and
- e) d) collecting said coated granules of a predetermined size.

11. (cancelled)

12. (original) The process of claim 10, wherein said granulator is a falling curtain type of granulator.

13. (currently amended) Use of a molten sulfur/ clay slurry to prepare a matrix for the delivery of an additional fertilizer material, said use comprising the steps of:

- a) preparing a liquefied mixture of sulfur and a swelling clay;
- b) dispersing an additional fertilizer material into said liquefied mixture.

14. (original) The use according to claim 13, wherein said additional fertilizer material is ammonium sulfate fines.

15. (original) A sulfur-based slurry matrix for slowing down rate of release of an incorporated fertilizer component, said slurry comprising:

- i) molten sulfur
- ii) clay, and
- iii) ammonium sulfate fines.

16. (currently amended) The Use of the-a sulfur-based slurry matrix to prepare of claim 15 to provide a slow release fertilizer product, said use comprising the steps of:

- a) preparing a slurry of molten sulfur and a swelling clay;

b) adding to said slurry ammonium sulfate fines.

17. (original) The slurry matrix of claim 15 wherein said ammonium sulfate fines have an average particle size of less than about 300 microns.

18. (original) The slurry matrix of claim 17 wherein said average particle size is less than about 150 microns.

19. (original) The slurry matrix of claim 17 comprising up to about 50% by weight of said fines.

20. (original) The slurry matrix of claim 15 comprising a sulfur to clay ratio of about 10 to 1 to about 20 to 1 by weight.

21. (currently amended) ~~The Use of the slurry matrix of claim 15-a sulfur-based~~  
~~slurry matrix~~ in a pastillator to form fertilizer pastilles, said use comprising the steps of:

- a) preparing a slurry of molten sulfur and a swelling clay;
- b) dispersing into said slurry ammonium sulfate fines;
- c) delivering said slurry containing ammonium sulfate fines to a pastillator for formation of fertilizer pastilles.

22. (original) The slurry matrix of claim 15 incorporating ammonium sulfate as said fertilizer component.

23. (currently amended) ~~The Use of the slurry matrix of claim 15-a sulfur-based~~  
~~slurry matrix~~ in a falling curtain granulating drum to form fertilizer granules, said use comprising the steps of:

- a) preparing a slurry of molten sulfur and a swelling clay;
- b) dispersing into said slurry ammonium sulfate fines;
- c) delivering said slurry containing ammonium sulfate fines to a falling curtain granulating drum for formation of fertilizer granules.